

# Notice of Allowability

Application No.

10/644,038

Examiner

Michael P. Stafira

Applicant(s)

DOBBS ET AL.

Art Unit

2877

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after final amendment filed Feb. 2, 2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1-20 are allowed over the prior art of record.
2. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art fails to disclose or make obvious a system for remotely imaging a sample using optical radiation reflected/scattered from the sample having a focal planar array configured to detect the first and second optical radiation after interaction with the sample and generate a single detection signal; a first lock-in amplifier configured to process the single detection signal based on the first frequency to produce a first output signal; and a second lock-in amplifier configured to process the single detection signal based on the second frequency to produce a second output signal; wherein the FPA detects the first and second optical radiation free-of image mis-registration, and in combination with the other recited limitations of claim 1.

Claims 2-6 are allowed by the virtue of dependency on the allowed claim 1.

Regarding claim 7, the prior art fails to disclose or make obvious a method of remotely imaging a sample using optical radiation reflected/scattered from the sample having the steps of detecting using a FPA, the first and second beams of optical radiation after interaction with the sample to produce a detection signal, wherein the first and second beams of optical radiation are detected by the FPA free-of image mis-registration; determining a first portion of the detection signal that is present at the first frequency; determining a second portion of the detection signal that is present at the second frequency; and obtaining polarization information about the sample based on the first portion of the detection signal and the second portion of the detection signal,

Art Unit: 2877

and in combination with the other recited limitations of claim 7. Claims 8-11 are allowed by the virtue of dependency on the allowed claim 7.

Regarding claim 12, the prior art fails to disclose or make obvious a system for remotely imaging a sample using optical radiation reflected/scattered from the sample having a single FPA configured to detect the optical radiation from the plurality of sources after interaction with the sample and generate a detection signal wherein the plurality of sources are detected by the FPA free-of image mis-registration; a plurality of lock-in amplifiers corresponding to the plurality of sources and respectively configured to generate components of the detection signal that are present at the different frequencies; wherein the components of the detection signal correspond to radiation from the sample at the different polarizations, and in combination with the other recited limitations of claim 12. Claims 13-16 are allowed by the virtue of dependency on the allowed claim 12.

Regarding claim 17, the prior art fails to disclose or make obvious a method of remotely imaging a target using optical radiation reflected/scattered from the target having the steps of transmitting the first and second beams of optical radiation to the target; and detecting free-of image mis-registration on an FPA, radiation at the first polarization and radiation at the second polarization from the target using a phase sensitive technique and the first and second frequencies, and in combination with the other recited limitations of claim 17. Claims 18-20 are allowed by the virtue of dependency on the allowed claim 17.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue


Art Unit: 2877

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Michael P. Stafira  
Primary Examiner  
Art Unit 2877

February 14, 2006